#### THRIFT INDUSTRY

# **Interest Rate Risk Measures**

# Office of Thrift Supervision

Risk Modeling and Analysis Division

*Release Date:* 2/24/2009



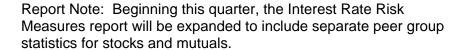
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#### Risk Modeling and Analysis Division

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#### Fourth Quarter 2008



The attached tables present the preliminary industry statistics for several measures of interest rate risk (IRR): the Pre-Shock Net Portfolio Value (NPV) Ratio, the Interest Rate Sensitivity Measure, the Post-Shock NPV Ratio, and the Change in NPV Ratio. These measures are defined in footnotes found in the tables. These tables can be used to assess an institution's level of IRR relative to the industry and its respective mutual or stock peer group.

For example, an institution can find its approximate Pre-Shock NPV Ratio ranking by referring to TABLE 1 on the following page. Assume XYZ Savings has a Pre-Shock NPV Ratio of 18%. In the last column of the table, locate the first value that is larger than XYZ's Pre-Shock NPV Ratio. For XYZ Savings, this corresponds to the tenth row of the table.

The first column of the tenth row present XYZ's overall Pre-Shock ranking: XYZ's Pre-Shock NPV Ratio places this institution in the fifth quintile of the industry. The second column shows an institution's rank with greater precision. XYZ's Pre-Shock NPV Ratio is better than approximately 85 percent of the industry for the current quarter.

The Final Interest Rate Risk Measures report for the December, 2008 cycle will be available on the OTS Web page at http://www.ots.treas.gov/StatisticalReleases by March 26, 2009.

# **Interest Rate Risk Measures**

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#### TABLE 1: Pre-Shock NPV Ratio\*as of 12/31/2008

Quintile	Percent of Industry	*Pre-Shock NPV Ratio
1st	10	7.35
	15	8.13
	20	8.70
2nd	30	9.62
	40	10.49
3rd	50	11.39
	60	12.57
4th	70	14.51
	80	16.70
5th	85	18.45
	90	20.85
	1st 2nd 3rd 4th	Industry  1st 10

<sup>\*</sup> The Pre-Shock NPV Ratio is defined as the base-case (pre-shock) NPV divided by the present value of assets in the base-case.

TABLE 2: Interest Rate Sensitivity
Measure\* as of 12/31/2008

Quintile		Percent of Industry	*Sensitivity Measure
Н	1st	10	224
S		15	182
6		20	163
WORST	2nd	30	131
1		40	100
	3rd	50	81
		60	69
+	4th	70	56
EST		80	40
Щ	5th	85	34
B		90	28

<sup>\*</sup> The Interest Rate Sensitivity Measure is defined as the decline (in basis points) in the NPV ratio caused by a +200 bp increase or -100 bp decrease in rates, whichever produces the larger decline.

TABLE 3: Post-Shock NPV Ratio\*as of 12/31/2008

	Quintile	Percent of Industry	*Post-Shock NPV Ratio	
Н	1st	10	6.38	
S		15	7.12	
WORST		20	7.79	
€	2nd	30	8.78	
1		40	9.57	
	3rd	50	10.44	
		60	11.54	
¥	4th	70	13.19	
F		80	15.71	
BEST	5th	85	17.29	
m		90	19.52	

<sup>\*</sup> The Post-Shock NPV Ratio is defined as the Net Portfolio Value (NPV) ratio after a +200 bp increase or -100 bp decrease in rates, whichever produces the smaller ratio.

## TABLE 4: NPV Ratio\* by Interest Rate Scenario as of 12/31/2008

	Quintile	Percent of Industry	-100 bp	PV Ratio +200 bp ss Than:
$\vdash$	1st	10	7.05	6.67
S		15	7.92	7.62
WORST		20	8.53	8.17
≥	2nd	30	9.49	9.05
1		40	10.43	9.87
	3rd	50	11.26	10.84
		60	12.60	12.14
+	4th	70	14.69	13.64
F		80	17.01	16.06
EST	5th	85	18.61	17.50
m		90	21.29	19.81

<sup>\*</sup> The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario.

#### TABLE 5: Change in NPV Ratio\* by Interest Rate as of 12/31/2008

	Quintile	Percent of Industry	-100 bp	NPV Ratio +200 bp Than:
Н	1st	10	-75	-219
S		15	-65	-179
WORST		20	-54	-157
≥	2nd	30	-36	-119
1		40	-24	-87
	3rd	50	-14	-62
		60	-2	-38
+	4th	70	8	-9
Ë		80	24	17
BEST	5th	85	37	40
Ш		90	56	70

<sup>\*</sup> The Change in NPV ratio is defined as the change (in basis points) in the NPV ratio caused by an interest rate shock of either -100 bp or +200 bp.

Note: The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario. An institution's NPV is equal to the estimated present value of assets minus the present value of liabilities plus the net present value of off-balance sheet contracts. These results are based on 732 OTS-regulated institutions for which the Dec 2008 Interest Rate Risk Exposure Reports are available.

Prepared by the Risk Modeling and Analysis Division, OTS, Washington, D.C., 2/24/2009.

## **Interest Rate Risk Measures - Mutuals**

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TABLE 6: Pre-Shock NPV Ratio\*as of 12/31/2008

Quintile	Percent of Industry	*Pre-Shock NPV Ratio
1st	10	8.62
	15	9.40
	20	10.28
2nd	30	11.12
	40	12.25
3rd	50	13.75
	60	15.39
4th	70	16.62
	80	18.88
5th	85	20.49
	90	24.13
	1st 2nd 3rd 4th	Industry  1st 10

<sup>\*</sup> The Pre-Shock NPV Ratio is defined as the base-case (pre-shock) NPV divided by the present value of assets in the base-case.

TABLE 7: Interest Rate Sensitivity
Measure\* as of 12/31/2008

	Quintile	Percent of Industry	*Sensitivity Measure
$\vdash$	1st	10	244
S		15	224
6		20	186
WORST	2nd	30	155
1		40	119
	3rd	50	97
		60	75
+	4th	70	65
F		80	49
BEST	5th	85	40
m		90	35

<sup>\*</sup> The Interest Rate Sensitivity Measure is defined as the decline (in basis points) in the NPV ratio caused by a +200 bp increase or -100 bp decrease in rates, whichever produces the larger decline.

TABLE 8: Post-Shock NPV Ratio\*as of 12/31/2008

	t-Shock V Ratio
_ 1st 10	7.59
<u>က</u> 15	8.37
15 15 20 20 2nd 30	9.09
<b>2</b> 2nd 30	9.87
<b>†</b> 40 1	1.38
3rd 50 1	2.38
60 1	4.18
	5.39
80 1	7.43
日 80 1 出 5th 85 1 の 90 2	9.19
<u>m</u> 90 2	22.51

<sup>\*</sup> The Post-Shock NPV Ratio is defined as the Net Portfolio Value (NPV) ratio after a +200 bp increase or -100 bp decrease in rates, whichever produces the smaller ratio.

#### TABLE 9: NPV Ratio\* by Interest Rate Scenarioas of 12/31/2008

	Quintile	Percent of Industry	-100 bp	PV Ratio +200 bp ss Than:
	1st	10	8.49	7.95
WORST		15	9.10	8.59
8		20	10.05	9.20
$\geq$	2nd	30	10.95	10.24
1		40	12.33	11.82
	3rd	50	13.51	12.66
		60	15.45	14.27
+	4th	70	16.74	15.46
F		80	19.37	17.56
BEST	5th	85	20.71	19.19
m		90	24.39	22.51

<sup>\*</sup> The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario.

#### TABLE 10: Change in NPV Ratio\* by Interest Rateas of 12/31/2008

Quintile	Percent of Industry	-100 bp	n NPV Ratio +200 bp Than:
1st	10	-66	-243
	15	-56	-224
	20	-43	-183
2nd	30	-31	-154
	40	-20	-112
3rd	50	-10	-89
	60	1	-63
4th	70	11	-37
	80	24	-3
5th	85	34	5
	90	48	27

<sup>\*</sup> The Change in NPV ratio is defined as the change (in basis points) in the NPV ratio caused by an interest rate shock of either -100 bp or +200 bp.

Note: The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario. An institution's NPV is equal to the estimated present value of assets minus the present value of liabilities plus the net present value of off-balance sheet contracts. These results are based on 285 OTS-regulated institutions for which the Dec 2008 Interest Rate Risk Exposure Reports are available.

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## **Interest Rate Risk Measures - Stock**

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TABLE 11: Pre-Shock NPV Ratio\*as of 12/31/2008

Quintile	Percent of Industry	*Pre-Shock NPV Ratio
1st	10	6.68
	15	7.74
	20	8.13
2nd	30	9.04
	40	9.85
3rd	50	10.43
	60	11.27
4th	70	12.37
	80	14.48
5th	85	16.10
	90	18.68
	1st 2nd 3rd 4th	Industry  1st 10

<sup>\*</sup> The Pre-Shock NPV Ratio is defined as the base-case (pre-shock) NPV divided by the present value of assets in the base-case.

TABLE 12: Interest Rate Sensitivity
Measure\* as of 12/31/2008

(	Quintile	Percent of Industry	*Sensitivity Measure
$\perp$	1st	10	194
S		15	166
6		20	150
WORST	2nd	30	113
1		40	90
	3rd	50	75
		60	63
+	4th	70	50
F		80	36
EST	5th	85	31
m		90	25

<sup>\*</sup> The Interest Rate Sensitivity Measure is defined as the decline (in basis points) in the NPV ratio caused by a +200 bp increase or -100 bp decrease in rates, whichever produces the larger decline.

TABLE 13: Post-Shock NPV Ratio\*as of 12/31/2008

	Quintile	Percent of Industry	*Post-Shock NPV Ratio
Н	1st	10	5.65
S		15	6.56
WORST		20	7.20
€	2nd	30	8.14
1		40	8.89
	3rd	50	9.64
BEST ←		60	10.41
	4th	70	11.26
		80	13.55
	5th	85	15.49
m		90	17.62

<sup>\*</sup> The Post-Shock NPV Ratio is defined as the Net Portfolio Value (NPV) ratio after a +200 bp increase or -100 bp decrease in rates, whichever produces the smaller ratio.

## TABLE 14: NPV Ratio\* by Interest Rate Scenarioas of 12/31/2008

	Quintile	Percent of Industry	*NPV Ratio -100 bp +200 bp Less Than:	
BEST ← → WORST	1st	10	6.48	6.23
		15	7.28	6.83
		20	7.96	7.73
	2nd	30	8.84	8.64
		40	9.65	9.28
	3rd	50	10.36	10.03
		60	11.18	10.81
	4th	70	12.43	12.05
		80	14.83	13.81
	5th	85	16.84	15.96
a		90	19.30	18.02

<sup>\*</sup> The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario.

#### TABLE 15: Change in NPV Ratio\* by Interest Rateas of 12/31/2008

	Quintile	Percent of Industry	*Change in NPV Ratio -100 bp +200 bp Less Than:	
◆ WORST	1st	10	-81	-189
		15	-70	-156
		20	-58	-137
	2nd	30	-39	-100
		40	-27	-72
	3rd	50	-15	-49
		60	-5	-22
+	4th	70	7	1
Ë		80	24	39
BEST	5th	85	38	62
Ш		90	63	86

<sup>\*</sup> The Change in NPV ratio is defined as the change (in basis points) in the NPV ratio caused by an interest rate shock of either -100 bp or +200 bp.

Note: The NPV ratio for any interest rate scenario is defined as the NPV in that rate scenario divided by the present value of assets in the same rate scenario. An institution's NPV is equal to the estimated present value of assets minus the present value of liabilities plus the net present value of off-balance sheet contracts. These results are based on 447 OTS-regulated institutions for which the Dec 2008 Interest Rate Risk Exposure Reports are available.

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